

**Sierra-San Joaquin Noxious Weed Alliance**  
Fresno, Madera and Mariposa Counties  
Fiscal Year 2000-2001

This proposal and work plan have been developed for contracting with the California Department of Food and Agriculture to implement a weed education and control program under the Assembly Bill 1168 Weed Management Area support program.

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The Sierra-San Joaquin Noxious Weed Alliance (S-SJ NWA) proposal and work plan consists of the following components:

- I. Weed Management Area Status
- II. Proposal and Work Plan
  - A. Education and Outreach
  - B. Detection and Mapping
  - C. Cooperative YST Control Projects

## **I. Weed Management Area Status**

**Memorandum of Understanding:** The Sierra-San Joaquin Nevada Noxious Weed Alliance has a Memorandum of Understanding signed in 2000 by 16 parties: Mariposa, and Fresno counties; California Department of Food and Agriculture; California Department of Forestry and Fire Protection; California Department of Transportation, Districts 6 and 10; Bureau of Land Management, Bakersfield and Folsom Resource Areas; Coarsegold, Sierra, and Mariposa Resource Conservation Districts; California Native Plant Society, Sequoia Chapter; Southern California Edison Company; University of California Cooperative Extension; Sierra National Forest; Natural Resources Conservation Service; Yosemite National Park, and United States Geological Survey, Western Ecological Research Center. Our MOU is open to new parties, and we expect that California Department of Fish and Game and California State Parks will sign on soon. Our group began meeting in April 1998.

**Education and Awareness Projects:** Our WMA group is publishing a color brochure to educate the public on the "Top 10" invasive weeds of our three-county area. We are also assembling a field handbook for technical use in weed identification and control methods. These efforts are being funded by a National Fish and Wildlife Foundation grant for \$5,000 and contributions from over 15 private and nonfederal

agencies. We have established a website, currently housed at [HYPERLINK "http://www.uckac.edu/weedbiology/weedmgmtalliance.htm."](http://www.uckac.edu/weedbiology/weedmgmtalliance.htm) The site will soon move to [cdfa.ca.gov/wma](http://cdfa.ca.gov/wma). We have had several public weed education meetings, posted fliers about yellow starthistle (YST) in the Merced River Canyon, and had our display booth at five public events. We have hosted two weed education tours in the field, two in 1998 and four in 1999, each with invited invasive species experts. Joe DiTomaso, IPM Specialist for University of California, spoke and conducted a field education session about YST at North Fork in 1999; agencies, school districts, general public, and a local television station were invited to attend.

**Mapping or Survey Projects:** The S-SJ NWA has been mapping yellow starthistle using GPS and GIS in the Merced River Canyon and in the foothills of Fresno County. Maps will be documented to reflect what year(s) they portray the extent of infestations. All roadsides in Mariposa County outside the National Forest have been mapped for yellow starthistle by U.C. Cooperative Extension. The Sierra National Forest staff have been inventorying all species of noxious weeds along roads and in project areas and will convert these data to a GIS layer by the end of the year 2000. We have and will continue to contribute data to the CDFA Cooperative Yellow Starthistle Mapping. The National Park Service and the USGS have been inventorying and mapping exotics in disturbed areas of Yosemite National Park (Mariposa and Madera Cos.) and Kings Canyon National Park (Fresno Co.) for several years.

**Merced Canyon Project:** The Merced Canyon project area covers about 20 miles of the Merced River corridor. The corridor is largely clear of yellow starthistle, but there are over 100 acres where this weed predominates, mostly at El Portal and Briceburg. The S-SJ NWA has sponsored several work days for hand pulling new and outlier infestations of yellow starthistle by Forest Service, BLM, Mariposa County RCD, and volunteers. The National Park Service implemented mechanical control (hand-pulling and mowing) on nine acres and prescribed burning on 9 acres of YST at El Portal. The California Department of Transportation, in coordination with the S-SJ NWA, sprayed a yellow starthistle-infested section of Highway 140 with Transline in 1999.

**Prather/Auberry/Tollhouse (PAT) Project:** The PAT project covers areas of the Fresno County foothills (including the Hwy 168 corridor) where yellow starthistle is expanding its range. Forest Service staff, in coordination with the S-SJ NWA, handpulled outlier and new infestations of YST and sprayed 10 acres of YST with glyphosate in both 1999 and 2000. A 0.5 acre demonstration plot for yellow starthistle control was established and sprayed with Transline by CDFA in 1999.

**Other WMA Activities:** U.S. Forest Service has a crew of two weed surveyors/eradicators patrolling Sierra National Forest in search of new infestations. Other efforts in the three-county area include chemical control by counties and CDFA of diffuse knapweed, spotted knapweed, rush skeletonweed; and completion of NEPA documentation for chemical control of scotch and Spanish broom by Forest Service and PG&E in the Bass Lake area. University of California weed specialists have several yellow starthistle study sites demonstrating different methods of controlling YST in Mariposa County. One site was 35 acres of ranchland sprayed with Transline in March 2000, showing dramatic results. The U.S. Forest Service and National Park Service have successfully hand-pulled and machine-cut yellow starthistle stands at the upper elevational limit of its range on National Forest (Mammoth Pool Road, Sierra Sky Ranch Road, Stump Springs Road) and Park Service (Wawona Road, Foresta, Tioga Road, El Portal Road) roads for the last three years.

**Strategic Plan:** An action plan is being drafted for the three-county weed alliance, delineating actions to be taken and who will be responsible. A draft plan exists for Merced and PAT local weed projects, outlining a strategy for implementing Integrated Weed Management over the next five years.

## II. Funding Proposal and Work Plan

### **A. Education and Outreach**

The Sierra-San Joaquin Nevada Noxious Weed Alliance has established an education and outreach committee. The committee will work closely with adjoining WMAs and the statewide steering committee.

- 1) The committee will arrange for distribution of weed education brochures that were published using a National Fish and Wildlife Foundation grant and matching contributions. The brochures feature the worst weeds of the three-county area, weed education information, web site links and key contacts for information. Outlets will include Agricultural Commissioners Offices, county fairs, libraries, nurseries, Master Gardener offices, Farm Advisers.

Objective 1: The S-SJ NWA will distribute brochures to through Agricultural Commissioners Offices, U.S. Forest Service, district fairs, nurseries in the three-county area, Master Gardeners, U.C. Cooperative Extension and California Department of Forestry and Fire Protection.

Evaluation 1: The number of brochures distributed will be recorded. The number of new weed infestations reported as a result of the brochure and incoming phone calls prompted by the brochure and its list of contact numbers will also be tallied as well as personal contacts.

- 2) The WMA will organize two field-day/workshops to be held at S-SJ NWA projects. These workshops will bring in outside experts, as well as allow local experts to disseminate information on control of yellow starthistle and other weeds as appropriate. The workshops will also showcase examples of treatment methods used in the projects with discussions of relative success and costs.

Objective 2: Two workshops will be held by the S-SJ NWA (approximately May 1, 2001 and June 15, 2001): the Jerseydale site in Mariposa County and another site.

Evaluation 2: The name, number and affiliation of each speaker and attendee will be recorded. The workshop agenda and attendance will be included in the annual report.

Demonstration of YST control techniques (chemical and other methods)

(up to 4 sites, each from 0.5 acres to 10 acres) (\$1,500)

In-kind Contribution from CDFA

YST control demonstration sites in Mariposa County (\$1,500)

In-kind Contribution from UCCE

Demonstration site at Mariposa County Fair by Mariposa Co. RCD (\$500) In-kind Contrib.-MCRCD

- 3) University of California Cooperative Extension will publish various weed education fliers and design and post web site educational information.

Objective 3: Write, design, distribute and post on the web weed education information

Evaluation 3: Record the number of fliers distributed and distribution locations. Record the number of web site hits.

Design, layout, production and posting (\$500)

In-kind Contribution from UCCE

- 4) Sierra Resource Conservation District will publish, through an EQIP grant, weed education and awareness materials for Fresno County areas.

Objective 4: Sierra RCD to publish educational pamphlet, display, fliers and signs for Prather/Auberry/Tollhouse project area in Fresno County to increase public awareness and provide tools to people wanting to control weeds on their lands.

Evaluation 4: Record the number of fliers distributed and distribution locations. Record the number of displays and where and when displayed.

Design, layout, production and posting (\$6,000)

In-kind Contribution from Sierra RCD

## **B. Detection and Mapping**

The S-SJ NWA has created a Strategic Planning Committee. This committee will see that information on YST distribution in the three county area is contributed to the CDFA's Yellow Starthistle Cooperative Mapping project. The committee will initiate the following actions:

- 1) Mapping and inventory on National Forest System lands will be implemented by 2 seasonal employees to allow for early control of new weed infestations and prioritization of control efforts for larger infestations.

Objective 1: Detect and map new weed infestations on National Forest System lands.

Evaluation 1: Crew will provide summaries of the total number of new weed infestations mapped and the total acreage by species in addition to areas surveyed where no weeds were found.

Inventory and mapping (\$3,000)

In-kind Contribution from USFS

- 2) The Fresno County Department of Agriculture will inventory and map YST and Italian thistle in Fresno County using CDFA's protocols.

Objective 2: Fresno County Department of Agriculture will survey and map YST and Italian thistle populations in along foothill roads of Fresno County. This will allow early control of new YST infestations and prioritization of control efforts for larger infestations of YST in the third of our 3 counties (Mariposa county was mapped in 1999, Madera Co. under this proposal).

Evaluation 2: The S-SJ NWA will record the number of new YST populations detected and the miles of roadway surveyed and mapped. Maps will be produced illustrating population locations.

Fresno Co. YST/Italian thistle mapping (\$1,000)

In-kind Contribution from Fresno Co. Dept. Ag.

## **C. Cooperative YST Control Projects**

A multi-owner cooperative pilot project will be initiated to control yellow starthistle in the Merced River Canyon. Jurisdictions and land ownerships include National Park Service, U.S. Forest Service, Bureau of Land Management, private and California State Department of Transportation.

- 1) Control of yellow starthistle in the Merced River Canyon to prevent further spread of an incipient population, preclude the occupation of endangered plant species habitat, minimize movement of weeds by rafters and reduce the transport of YST into Yosemite National Park.

Objective 1: Hire a pesticide applicator to treat YST in the WMA, with a focus on the Merced River Canyon (the applicator will also be able to spray for private landowners wishing to control their infestations). The maximum number of acres that funding allows will be treated with Transline. Chemical treatment will be complemented by ongoing manual and mechanical control efforts of infestations consisting of 1 to a few plants, or in areas too sensitive to use herbicides.

Evaluation 1: Success of the treatment will be evaluated by sampling the reduction in yellow starthistle (percent cover for peak growth treatments or density for off-season treatments) 2 months and 1 year following treatment with herbicide and comparing it to pretreatment data. Photos will also be

taken of each project site on 3 occasions: at the time of pretreatment sampling, 2 months following treatment, and 1 year after treatment at the time of repeat sampling for YST abundance.

Pesticide applicator contract (\$3,000)	Cost: \$3,000
Data collection and management (\$900)	In-kind contribution from USGS
Mechanical and chemical control, sampling, photography (\$8,000)	In-kind contribution from NPS

- 2) Control of yellow star-thistle in the Prather/Auberry/Tollhouse project area to prevent further spread of an incipient population and reduce the transport of YST further east.

Objective 2a: U.S. Forest Service employees will treat up to 10 acres near Highway 168 in Fresno County with backpack sprayers for the third year in 2001. Treatment will occur in the spring with a follow-up if needed.

Objective 2b: Fresno County Department of Agriculture will chemically treat YST with Transline using a spray rig to control and prevent the spread along highly visible Tollhouse Road.

Evaluation 2: Success of the treatments will be evaluated by sampling the reduction in yellow starthistle (percent cover for peak growth treatments or density for off-season treatments) 2 months and 1 year following treatment with herbicide and comparing it to pretreatment data. Photos will also be taken of the project site on 3 occasions: at the time of pretreatment sampling, 2 months following treatment, and 1 year after treatment at the time of repeat sampling for YST cover.

Chemical treatment, sampling, photography (\$2,500)	In-kind contribution from USFS
Chemical treatment (\$500)	In-kind contribution from Fresno Co. Dept of Ag.

- 3) Mechanical control of yellow starthistle along the Highway 41 and 49 corridors by California Department of Forestry and Fire Protection, Mariposa, Madera, and Merced Ranger Unit, will use hand crews to prevent further spread of incipient populations and reduce the transport of YST farther east.

Objective 3: California Department of Forestry and Fire Protection hand crews will mechanically control yellow starthistle along Highway 41 between Coarsegold and Oakhurst and along Highway 49 between Oakhurst and Mariposa.

Evaluation 3: Success of the treatment will be evaluated by sampling the reduction in yellow starthistle (percent cover or density for immature plants) 2 months and 1 year following mechanical treatment and comparing it to pretreatment data. Photos will also be taken of the project site on 3 occasions: at the time of pretreatment sampling, 2 months following treatment, and 1 year after treatment at the time of repeat sampling for YST cover.

Mechanical treatment (\$4,250)	In-kind Contribution from CDF, MPA, MAD, and MCD R U
Project management and safety (\$15,000)	In-kind Contrib. from CalTrans
Sampling, photography (\$200)	In-kind Contribution from UCCE

## Budget

<u>Item</u>	<u>Cost: AB1168</u>	<u>Cost: In-kind</u>
Education		
Field days		\$3,500
UCCE		500
Sierra RCD		6,000
Detection and Mapping		
Inventory and mapping		3,000
Thistles on Fresno Co. roads		1,000
YST Control		
Merced Canyon	\$3,000	8,900
PAT project		3,000
Hwy 41 and 49 control		<u>19,450</u>
<b>Total</b>	<b><u>\$3,000</u></b>	<b><u>\$45,350</u></b>

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